

width 3.2 mm. Body pale blue or blue-gray up to and including the blue band in subdorsal space leaving a few black dots and the row of lateral spots which indent the lower edge of the band. Dorsal space black, the blue dorsal line broken a little in middle of each segment or continuous. Red marks absent or a partly duplicated ad-dorsal line with a few subdorsal dots. Hair all red, thin dorsally, not obscuring the body, quite thick subventrally but not tufted. Venter gray at first, later black, often patched with blue.

Cocoon and pupa as in the other species of *Clisiocampa*.

*Food plants.* Willow and poplar (Nash), wild cherry and wild rose (Wiley) and wild gooseberry.

### UNCERTAINTY OF THE DURATION OF ANY STAGE IN THE LIFE- HISTORY OF MOTHS.

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So much emphasis has been laid on the number of moults and the duration of each stage of larval life of our moths, that it seems to me worth while to show a few instances of the variation that occurs. I think that it cannot be stated positively that any species has a certain number of moults, or that any stage lasts a certain number of days.

I have had one brood of *H. caryae* moult four times, and another moult five times. The same difference occurred with *C. juglandis* larvae.

Owing to my arrangements of the larvae there is no—or the minimum—chance of mistake, the moults being always noted from the same boxful of larvae, and those always the first hatched.

The following tables show a few instances of variation among Spingid larvae.

#### *Cressonia juglandis.*

Stage.	1889.	Days.	1891.	Days.	Diff. in No. of Dys. 1891 less than 1889 by
Eggs laid	July 9		July 6		
Hatched	July 17	8	July 13	7	1
1st moult	" 21	4	" 16	3	1
2nd moult	" 27	6	" 20	4	2
3rd moult	Aug. 1	5	Aug. 24	4	1
4th moult	" 8	7	" 30	6	1
Stopped eating	" 29	21	no record		
Pupated	Sept. 7	9	" "		

#### *Everys myron.*

Stage.	1889.	Days.	1893.	Days.	Diff. in No. of Dys. 1893 less than 1889 by
Eggs laid	June 14		July 13		
Hatched	June 23	9	July 19	6	3
1st moult	" 29	6	" 23	4	2
2nd moult	July 4	5	" 27	4	1
3rd moult	" 8	4	" 30	3	1
4th moult	" 14	6	Aug. 3	4	2
Stopped eating	" 20	6	" 8	5	1
Pupated	" 27	7	" 12	4	3

#### *Smerinthus astylus.*

Stage.	1889.	Days.	1890.	Days.	Diff. in No. of Dys. 1890 less than 1889 by
Eggs laid	July 9		July 29		
Hatched	July 20	11	Aug. 8	10	1
1st moult	" 29	9	" 16	8	1
2nd moult	Aug. 4	6	" 22	6	0
3rd moult	" 12	8	" 29	7	1
4th moult	" 21	9	Sept. 5	7	2
Stopped eating	Sept. 5	15	" 14	8	7
Pupated	" 12	7	" 18	4	3

#### *Hemaris diffinis.*

Stage.	1891.	Days.	1891.	Days.	Diff. in No. of Dys. 1891 1st brood had
Eggs laid	no record		July 7		
Hatched	no record		July 14	7	
1st moult	no record		" 17	3	
2nd moult	May 30		" 20	3	
3rd moult	June 2	3	" 23	3	same
4th moult	" 13	11	" 27	4	7 more
Stopped eating	" 16	5	Aug. 2	6	1 less
Pupated	" 18	3	" 7	5	2 less than 2nd brood.